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In the Supreme Court of the United States

OCTOBER TERM, 1955.

No. 538

GLENN L. MARTIN COMPANY,

Petitioner,

v.

NORTHWEST AIRLINES, INC.,
THE BRITISH AVIATION INSURANCE COMPANY, LTD.,
THE INSTITUTE OF LONDON UNDERWRITERS,
R. WALKER ROYLANCE and A. J. WHITTALL
(For the Subscribing Underwriting
Members of Lloyd's, London),
FIDELITY & CASUALTY COMPANY OF NEW YORK,

Respondents.

PETITION FOR WRIT OF CERTIORARI
To the United States Court of Appeals
For the Sixth Circuit.

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November 23, 1955.

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PETITION FOR WRIT OF CERTIORARI.

To the Honorable the Chief Justice and the Associate Justices of the Supreme Court of the United States:

Petitioner, Glenn L. Martin Company, prays that a writ of certiorari issue to the United States Court of Appeals for the Sixth Circuit to review the judgment of that court in cause No. 12,130 wherein that court reversed judgments entered by the District Court upon jury verdicts.

OPINIONS BELOW.

The opinions and orders below appear:

Opinion of the District Court, Judge Emerich B. Freed of the Northern District of Ohio, overruling the motion for new trial of Northwest Airlines, Inc. and the several insurance companies who were plaintiffs with it (and are respondents here), has not been reported. It is printed in the appendix hereto, page 23.

Opinion of the United States Court of Appeals for the Sixth Circuit (Judge Stewart writing, Judge Simons concurring, and Judge McAllister dissenting), reversing the judgments of the District Court, is in the appendix, page 24, and is reported as 224 F. 2d 120.

Judgment of the Court of Appeals is in the appendix, page 46.

Order of the Court of Appeals (Judges Stewart and Simons concurring and Judge McAllister dissenting) denying petitioner's application for rehearing, is in the appendix, page 46.

Order of the Court of Appeals denying petitioner's motion to vacate for failure to consider petitioner's application for rehearing *en banc* in the manner required by *Western Pacific Railroad Corp. v. Western Pacific Railroad Co.* (1953), 345 U. S. 247, is in the appendix, page 47.

JURISDICTION.

The judgment presented for review is dated and was entered May 31, 1955; petition for rehearing was denied August 29, 1955; motion to vacate and rehear *en banc* was denied October 3, 1955.

This Court has jurisdiction to review under 28 U. S. C. § 1254(1), upon petition for certiorari filed within the 90 days prescribed by 28 U. S. C. § 2101(c).

QUESTIONS PRESENTED.

This case presents the questions:

1. Whether the majority in the Court of Appeals has established a dangerously lax standard of care for commercial airlines by holding, as a matter of law:
   (a) That an airline, whose employees inspect an airplane, is exonerated from all responsibility for a crash claimed to have resulted from a defect which the airline's evidence shows is open and obvious;
   (b) That an airline need not supply a passenger plane with a known safety device.
2. Whether the majority in the Court of Appeals, in reversing the District Judge for charging on contributory negligence and assumption of risk, applied an erroneous standard of review.
3. Whether an airplane manufacturer's liability to an airline purchasing aircraft built pursuant to contract specifying the standards governing design and construction is to be measured by the abstract standard of common law negligence or by the specific standards of the contract.
4. Whether a Court of Appeals may reverse the District Court for giving a charge in absence of the objection required by Rule 51 of the Federal Rules of Civil Procedure. This is the question involved in *Victor D. Gibson v. Lockheed Aircraft Service, Inc.*, No. 42 on this Court's docket, wherein this Court granted certiorari. 349 U. S. 943.

5. Whether a Court of Appeals without prior announcement of its practice may, consistently with the requirement of *Western Pacific Railroad Corp. v. Western Pacific Railroad Co.* (1953), 345 U. S. 247, rule upon a request for rehearing *en banc* by vote alone of the panel which heard the case.

FEDERAL RULE INVOLVED.

Rule 51 of the Federal Rules of Civil Procedure says:

"At the close of the evidence or at such earlier time during the trial as the court reasonably directs, any party may file written requests that the court instruct the jury on the law as set forth in the requests. The court shall inform counsel of its proposed action upon the requests prior to their arguments to the jury, but the court shall instruct the jury after the arguments are completed. No party may assign as error the giving or the failure to give an instruction unless he objects thereto before the jury retires to consider its verdict, stating distinctly the matter to which he objects and the grounds of his objection. Opportunity shall be given to make the objection out of the hearing of the jury."

STATEMENT OF CASE.

This case arose out of the crash of an airplane.

Petitioner, Glenn L. Martin Company, manufactured the plane.

Respondent, Northwest Airlines, Inc., plaintiff below, bought it.

The plane was one of a fleet of 25 like two-engine planes manufactured by Martin under contract for Northwest.

—The Trial—It Was a Long One.

The suit was brought by Northwest and its insurers on diversity grounds. They alleged Martin was negligent in the design of the plane, material used, workmanship, inspection and testing. (6a.)[1] Recovery was sought (7a-9a):

(a) For the value of the plane lost;

(b) For certain workmen's compensation claims paid;

(c) For loss of use of four planes;

(d) For loss of use of the same four planes at a later date.

The case took four months to try.

It was tried to a jury.

The trial commenced November 6, 1952. For three and a half months evidence was heard. The next year, on February 19, 1953, the court charged. The jury held the case 14 days. It returned on March 5, 1953.

—Jury Decided for Martin.

The jury returned four separate verdicts, one on each of the four claims of damage asserted.

Each verdict was for defendant Martin, and four judgments were entered thereon. (887a-888a.)

The District Court, Judge Emerich B. Freed of the Northern District of Ohio, familiar with the evidence and the issues, overruled motion for new trial. He concluded (891a):

> "it would be a gross abuse of the Court's function and power to set aside a verdict reached by the twelve jurors in this case."

---

[1] The Record printed for the use of the Sixth Circuit is in Appendix form; this and other like references are to that Appendix.

—Court of Appeals Reversed.

The Court of Appeals, dividing two to one, reversed. All the judges held the question of Martin's negligence was correctly submitted to the jury; the majority reversed on the ground issues of contributory negligence and assumption of risk should not have been submitted to the jury. As will be seen, the majority reached this conclusion by (1) applying an incorrect standard of review, and (2) relaxing the standard of care demanded of commercial airlines.

In view of the holding of the Court of Appeals, and the verdicts returned by the jury, the circumstances of the accident are not presently material. However, it will help bring into focus the questions which arise to note what happened.

—This is How Case Arose.

The first of the airplanes was delivered to Northwest in August, 1947. (135a.)

About a year later, in the late afternoon of August 29, 1948, one of these planes, known as No. 44, on a flight from Chicago to Minneapolis, was flown into a fearful thunderstorm, described as the "worst" ever experienced. (135a-143a, 20b, 289b, 465b, 487b, 503b, 607b.)

The plane lost a wing.

It crashed.

It hit the earth near Fountain City, Wisconsin, a few miles upstream and across the Mississippi from Winona, Minnesota.

All aboard perished.

After the crash, investigation disclosed that the wing had broken at a point where the outer section of the wing was joined to the inner section by means of a structure known as a wedge.

At about the same time, and before anything was known of the crash of No. 44, another plane, No. 42, following the first one by 33 minutes, encountered the same storm area, but under conditions of lessened turbulence. (795a-796a.) On that flight, approaching the Mississippi, both the pilot and a Civil Aeronautics Administration inspector flying as a passenger heard a loud report. (152a.) Both, at first, attributed this to the dropping of the landing gear. The landing gear, however, proved to be in place, and locked. The pilot concluded the sound was caused by the closing of a by-pass valve; the inspector thought a part of the cowling might have blown off. (152a.)

The plane continued on to Minneapolis. It landed there safely.

Northwest then dispatched the plane on a flight to Duluth and back. That flight was uneventful except that the pilot found it required some extra "trim tab" to maintain the plane in level flight. (156a.)

The pilot reported this on his return.

Then he started for home.

But, reflecting on the matter, he left his car, returned to the ramp and asked that inspection be made of the plane. (157a.)

It was found that there was a complete break in the wing spar.

The other planes of the fleet were grounded. (167a.)

Eleven other planes were found to have fatigue cracks in the same wing joint. (953a.)

Whether Martin was at fault was the subject of much evidence—*pro* and *con*. That issue, all judges agreed, was properly submitted to the jury. The court found no error in that regard.

However, the majority held the trial judge should not have submitted to the jury the issues (a) whether

Northwest was negligent, (b) whether Northwest should have supplied the plane lost in the thunderstorm with radar, and (c) whether Northwest had assumed the risk.

—Court of Appeals Applied Wrong Standard.

The conclusion the majority reached is incredible. The result, if the ruling below stands, is that:

(a) A commercial airline, *as a matter of law*, shares no responsibility for a crash claimed to have resulted from a defect even though its employees inspect, and even though its evidence says the defect is open and obvious.

(b) A commercial airline, *as a matter of law*, need not install radar, a known safety device.

(c) If the employees of an airline who inspect a plane say they did not see a defect, the airline, *as a matter of law*, does not assume the risk of a hazard the evidence says is open and obvious.

Before turning to these points it will be well to note why contributory negligence and assumption of risk both play a part in this lawsuit.

(1) Contributory Negligence and Assumption of Risk Both Applicable.

All agree—petitioner, respondents, the trial judge, and the Court of Appeals—that (Appendix, pp. 31, 35):

1. Contributory negligence exists if the hazard is discoverable by exercise of ordinary care;
2. Assumption of risk exists if the hazard is known or is so obvious that the party must be taken to have known.

It also is agreed that under Wisconsin law—which controlled with respect to the plane lost in the thunder-

storm—contributory negligence is a defense *pro tanto* only until it equals or exceeds the negligence of the other party; assumption of risk is a complete defense.

(2) Ruling Below Will Have Important Consequences on Care Owed by Airlines.

The sweep of the ruling below, and its effect on the standard of care demanded of airlines, will become apparent from the character of evidence the majority held is not enough to go to the jury.

The great bulk of the evidence went to the question whether there was *any* negligence on Martin's part. The jury, as will be seen, decided there was none.

But on the present points, on which the Court of Appeals ruled as a matter of law, the evidence comprises only a few pages. It is so short that substantially all of it is set forth in this petition.

There are two points to note:

—(a) Northwest Did Not Just Buy a Plane—It Participated in Deciding How It Should Be Built.

This was not—most emphatically it was not—the purchase of an automobile from the showroom floor.

It was a cooperative venture to produce a plane built under the eye of the buyer pursuant to precise specifications.

Northwest watched the day-by-day construction. It checked what was done. It maintained a staff of engineers, inspectors and other technical personnel at the Martin plant for that purpose. (679b-701b.) Its engineers studied and approved the design as it affected every part of the plane before it was accepted. (703b, 712b.) They reviewed the drawings; they watched the wing spar assembly as it was built and as it was installed in the plane

(335a); they watched the tests made; they reported to their head office that the plane was "the most extensively tested airplane in commercial aviation history" (724b-725b).

The point is, Northwest had close—intimately close—knowledge of everything that went into the plane. Northwest's engineers, the majority conceded, "were in a position to recommend and actually did recommend various changes in design and manufacture." (Appendix, p. 32.)

Next—

—(b) Northwest Proved Defect Was Open and Obvious.

Northwest produced an independent witness—not in the employ of either party—Dr. Louis Bryant Tuckerman, to establish the character of the asserted defect. He said it was open and obvious. He spoke with the authority of 13 years on the faculty of physics at the University of Nebraska, and 30 years with the National Bureau of Standards. (208a-209a.) He had served on aircraft design committees for the Army and Navy and on aircraft structures committees of the National Advisory Counsel for Aeronautics. (210a.) He had had much to do with aircraft structures; as he put it, "The major part of my work has been associated with airplane and other aircraft structures" (211a).

In view of the issues, and the learning Dr. Tuckerman brought to the case, his was a powerful voice.

This is what Dr. Tuckerman said—under examination by counsel for Northwest (239a-240a):

> "Q. Now, going back to this design, Doctor, was this design in the respects in which you have stated it was dangerous and defective—Were those matters of design such as to require great and discriminating

knowledge and understanding, or were they open and obvious to any one who had any engineering knowledge whatever?

A. I don't know what you mean by 'any knowledge whatever,' but any competent engineer they were obvious to.

Q. And were they such as to require long, detailed study, or were they obvious so that one might know almost at first blush, on first examination?

A. When I looked at it I said, 'Who'—never mind that. When I looked at it I said that is not what it should be. The moment I saw that with the rough tool marks and the sharp corners I said it was not what it should be. I didn't require five minutes looking at that to decide it was not what it should be.

Q. What would you say from the facts known since 1945, was it obvious and visible that an airplane wing hung or attached to that fitting would eventually have fatigue cracks in the fitting?

A. Not knowing the loads which would come on it, it could not be said that way, but if the rest of the plane were, what shall I say—economically designed to give the light structure, then it was obvious that it would. That is, if this was designed to build a reasonably light wing, then this was dangerous.

Q. And was that true, obviously true, in 1945 as in 1948?

A. It was.

Q. And is it equally true that it was plainly foreseeable in 1945 that if fatigue cracks developed in that fitting, that those fatigue cracks would proceed and eventually cause a fracture of the member and a loss of the wing?

A. It was.

Q. As a matter of fact, with respect to a member of that kind did it then, or does it now, require any fatigue testing by you or any other competent designing engineer to see and observe and determine the

location of that weak spot, that danger spot in that fitting?

A. No."

Surely the law will not say to any man, much less an airline, that he may ignore what his evidence says is open and obvious.

REASONS FOR ALLOWANCE OF WRIT.

The Court should grant the writ because:

I. COURT BELOW HAS ESTABLISHED DANGEROUSLY LAX STANDARDS OF CARE FOR AIRLINES.

The majority has laid down law dangerous in two respects:

1. Court Fastened Improper Condition On Law of Contributory Negligence.

Northwest examined and inspected the planes throughout construction.

It maintained a staff at the Martin plant for that very purpose.

But, said the Court of Appeals, Northwest was not chargeable with anything so discoverable, even if the hazard was—as Dr. Tuckerman said it was—open and obvious.

Why?

Because, the majority ruled (Appendix, p. 38):

"The fact that inspections were made in no way increased the risk of harm."

Thus, even a careless inspection frees the airline.

The short answer is the answer Judge Cardozo gave to the argument—the same argument that the majority in the Court of Appeals here espoused—that one may escape

the consequences of his acts if he in no way increases the danger. Judge Cardozo's quiet answer in *Marks v. Nambil Realty Co., Inc.* (1927), 245 N. Y. 256, 157 N. E. 129, was (p. 130):

> "We cannot yield assent to this restriction of the field of duty."

The majority in the court below ruled the failure of the four Northwest engineers, who saw the part installed, to see what Dr. Tuckerman said was obvious, "in no way increased the risk of harm." (Appendix, p. 38.) But, the point is, as Judge Cardozo put it in *Marks* (157 N. E. at 130), one "does not have to prove" that "what was wrong has been made worse." On the contrary (p. 130):

> "His case is made out when it appears that by reason of such negligence what was wrong is still wrong, though prudence would have made it right."

But the Court of Appeals ruled (1) even if the airline inspected, (2) even if the jury believed the evidence of the airline's witness, Dr. Tuckerman, that the danger was open and obvious, the airline, as a matter of law, shares no responsibility because what it did made the condition no worse.

2. Court Ruled Airline Need Not Supply Known Aid to Safety.

Prior to the accident Northwest had "studied the radar question." (107a.)

Northwest decided not to install radar.

One of its reasons was it would be accurate only 95% of the time. (122a.)

The Court of Appeals ruled, as a matter of law, that Northwest was not obligated to supply the plane lost in the thunderstorm with radar.

The Court's reason was that "satisfactory" radar was not then commercially available (Appendix, p. 42) even though:

(a) Northwest's pilots had "flown aircraft equipped with two types of radar" (107a);

(b) "The equipment that was then available" had been tested by Northwest (107a);

(c) Northwest's communications engineer conceded "radar equipment that was available back prior to August of 1948 [when the plane was engulfed by the thunderstorm], would have been of assistance" (770a); and

(d) Northwest's superintendent of meteorology, speaking as of August 1948, confessed radar "certainly would be of assistance in circumnavigating a thunderstorm area" (127a).

Northwest, in telling why it did not install radar, did not even assign as a reason that it was not available. (107a-108a.)

Under such circumstances:

1. Is it to be ruled as a matter of law that an airline need not supply a known safety device?

2. Is it for the court to say radar was not available when Northwest's pilots had flown with it?

3. Is it for the court to say radar was not "satisfactory"? Or is it for the jury to consider whether ordinary care required the use of a known safety device even if, as claimed by Northwest, it would be effective only 95% of the time?

II. COURT APPLIED IMPROPER STANDARD OF REVIEW—IT INVADED FUNCTION OF TRIAL JUDGE AND JURY.

The trial judge was so certain of his conclusion that the issues were for the jury that he said "it would be a gross abuse" to hold otherwise. (891a.)

The Court of Appeals ruled otherwise—because it applied the wrong standard. It invaded the province of the trial judge and the jury.

1. Court Wiped Out Assumption Of Risk Except on Confession.

To take the issue from the jury the court laid down an astonishing rule of law.

The court used the failure of the four Northwest engineers who watched the installation, to see what Dr. Tuckerman said was obvious, as reason why the jury should not have been instructed on the point.

The majority said (Appendix, p. 34):

> "The evidence that Northwest's representatives did insist upon changes whenever they saw any reason to be dissatisfied leads to the conclusion, at least by negative implication, that they saw no reason to criticize the wing joint. They had no reason whatever *not* to object to anything they might regard as hazardous, and, in fact, had been expressly instructed by Northwest to insist upon any changes they thought would increase the safety of the airplanes.
>
> * * * There is no evidence that the danger lurking in the wing joint was so obvious to those Northwest representatives who actually did observe it that they must be taken to have appreciated that danger." (The emphasis is the court's.)

The court was acting as jury.

Forgetful of the proper role of court and jury, the court drew inferences—which, if to be drawn at all—only the jury could draw.

The court's ruling that, since Northwest's engineers did not complain, they must not have known, sterilizes assumption of risk as a living rule of law.

If the court is right, how can assumption of risk exist in any case, short of confession by the party?

If the matter was as open and obvious as Dr. Tuckerman said it was, and if the jury elected to believe him, as it had a right to do, it was for the jury, not the reviewing court, to say whether the condition was such that Northwest must be taken to have known.

2. Court Reversed 4-Months Trial For Error Shown to Be Harmless.

The Court of Appeals has undone a long jury trial for error the record shows did not affect the jury's verdicts.

So important do many courts consider it that jury verdicts be not lightly set aside, that if one issue adequate to sustain the verdict is correctly submitted the verdict will not be set aside even if there is error on another issue. It will, as a matter of law, be presumed the jury found on the issue which was correctly submitted—as in this case, negligence. This is the rule in Ohio. *Binder v. The Youngstown Municipal Ry. Co.* (1932), 125 O. S. 193, 180 N. E. 899; *Centrello v. Basky* (1955), 164 O. S. 41, 128 N. E. 2d 80. It is known as the "two-issue rule."

Application of the Ohio rule would have required affirmance of the judgments of the District Court.

But there is no need to rely on presumption.

—(a) Record Shows Jury Did Not Decide On Issues on Which Court Reversed.

The jury returned four separate verdicts.

The radar issue, which the Court of Appeals held should not have been submitted to the jury, in no way affected the result. That issue related *solely* to the plane lost in the thunderstorm. It in no way bore on the verdicts relating to the other planes.

But, *all* verdicts were the same,—for defendant Martin. The record thus affirmatively shows the radar issue on which the Court of Appeals reversed played no part in the decision.

And, since contributory negligence was a *pro tanto* defense only, unless it equalled or exceeded the negligence of the other party, the jury, had it reached the issue of contributory negligence, could have found it only in minor degree. This would have diminished the recovery. But that is not what happened; on the contrary the verdict was for Martin.

The errors, if they were such, were harmless for the additional reason that the Court of Appeals, had it applied the proper standard—as next will be pointed out—would have held Martin not liable in any event.

—(b) Court Should Have Applied Contract Standard, Not Common Law Standard.

The parties by contract specified Martin's obligations with respect to (1) design, (2) material, (3) workmanship, (4) inspection and testing—the very grounds of negligence assigned. On all these points the plane was to meet the standards prescribed by the Civil Air Regulations and by detailed specifications made part of the contract. (906a-921a.)

These standards the planes fully met.

There is no evidence to the contrary.

The Court of Appeals measured Martin's liability by the common law standard of ordinary care.

But, was liability to be tested by that abstract standard?

Was it not to be tested by the specific standards the parties agreed to in the contract?

If it was, then there was nothing to submit to the jury because there was no evidence Martin in any respect fell short of the requirements specified in the contract.

Northwest admits as much—for it sued, not for breach, but for asserted negligence.

The contract, to be sure, specified (902a):

> "Nothing contained in this Contract, however, shall relieve Martin from liability imposed on it by law for its negligence, if any * * *."

What liability does the law impose when the parties expressly agree on what is to be done?

Is negligence in such case to be measured by the abstract rule of the common law or by the standard of what was to be done as specified in the contract?

This is a question of obvious importance to airlines and manufacturers of aircraft which customarily operate under such contracts, as well as to all industries where products are manufactured to precise standards agreed to by manufacturer and purchaser.

This Court has never ruled on the question.

Here, if the contract standards control, there was nothing to go to the jury, and in view of the verdicts, any error in the charge was harmless.

3. Lack of Objection Required by Federal Rule 51 Bars Reversal.

The question involved in *Victor D. Gibson v. Lockheed Aircraft Service, Inc.*, No. 42, October Term 1955, where this Court granted certiorari, 349 U. S. 943, arises also in this case.

Rule 51 of the Federal Rules of Civil Procedure says:

> "No party may assign as error the giving or the failure to give an instruction unless he objects thereto before the jury retires to consider its verdict, stating distinctly the matter to which he objects and the grounds of his objection."

Here, as in *Gibson*, Northwest made known its position with respect to charges requested of the court. Northwest's position was the court should not charge on the subjects on which the Court of Appeals has now reversed. (826a-827a, 830a-833a.) In the light of the discussion then had, Martin subsequently submitted revised requests, including No. 12 on assumption of risk (837a-838a) and No. 13 on contributory negligence and radar. (838a-841a.)

Northwest said nothing.

The court then specified which of the requested charges would be given and which refused. As to the charges here in question the court ruled (842a):

> "No. 12 will be given with some changes; No. 13 will be given in its entirety with the mere change of the introductory sentence."

Again Northwest remained silent.

At the close of the court's charge, in response to the court's request that counsel (878a) "record such exceptions as you care to note or that you feel are justified," the following occurred (878a):

> "Mr. Harrison [Counsel for Northwest]: Your Honor, on behalf of the plaintiffs we have no objec-

tions or exceptions, except with reference to those matters which we have already presented to the Court and on which you have already made and announced your rulings.

The Court: As to the requested charges?

Mr. Harrison: Yes.

Mr. Crocker [Counsel for Martin]: Your Honor, we have nothing other than that. It just occurred to me whether it was necessary for us to take these up again, on the requests.

The Court: No, the record will show, gentlemen, that whatever objections or exceptions you have noted to the Court's refusal to charge as you requested will be regarded as having been made at this time."

The record thus shows that although exception was recorded to the "refusal to charge," nothing was said with respect to charges which the court *did* give on which the Court of Appeals has now reversed. The mandatory language of Rule 51 says the party must not only state whether he "objects thereto," but also state:

"distinctly the matter to which he objects and the grounds of his objection."

For all the record shows, Northwest, after the colloquy with the court, decided to let the court charge, and speculate on the chances with the jury.

III. COURT SHOULD REQUIRE ADHERENCE TO EN BANC PROCEDURE PRESCRIBED IN WESTERN PACIFIC CASE.

In *Western Pacific Railroad Corp. v. Western Pacific Railroad Co.* (1953), 345 U. S. 247, this Court outlined the *en banc* procedure it expected courts of appeals to follow. The Court considered it "essential" that (p. 260):

"court, and the litigants who appear before it, understand the practice—whatever it may be—whereby the court convenes itself *en banc*."

The Court said (p. 267):

> "We hold that the statute does not compel the court to adopt any particular procedure governing the exercise of the power; but whatever the procedure which is adopted, it should be clearly explained, so that the members of the court and litigants in the court may become thoroughly familiar with it * * *."

The Sixth Circuit, when the request for rehearing *en banc* was made on June 20, 1955, had said nothing on the subject. When it appeared from the order overruling the request for rehearing that the *en banc* request had not even been brought to the attention of the other judges, petitioner brought the matter to the court's attention on September 14, 1955, by motion to vacate. In denying that request, the Court of Appeals said in its order of October 3, 1955 (Appendix, p. 47):

> "In the order of this court of August 12, 1955, denying a motion to reconsider in *National Labor Relations Board v. Cambria Clay Products Company*, No. 12072, it was stated: 'And the court being of the opinion that the uniform procedure heretofore followed by the court should not be departed from, namely, that in cases where the appeal was heard, and the judgment or order complained of was decided, by a regular Court consisting of three judges only, a petition to rehear or to reconsider should not be considered by the Court en banc.' The uniform procedure there made public was established after full consideration by a majority of the Circuit Judges of this Circuit in active service."

The order in the *Cambria* case to which the Court referred has not even been published.

Burial of the court's practice on the subject in a memorandum denial of rehearing can scarcely be what this Court expected when it directed that the *en banc* procedure (345 U. S. at p. 267):

"be clearly explained, so that the members of the court and litigants in the court may become thoroughly familiar with it * * *."

It is not at all unlikely that the pooled experience of all of the judges of the Sixth Circuit, had it been brought to bear on this case, would have rejected the principles which here have been made law by one vote.

CONCLUSION.

This case raises questions which need, and should have, the attention of this Court.

The writ should issue.

Respectfully submitted,

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November 23, 1955.

APPENDIX.

MEMORANDUM OPINION OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF OHIO, EASTERN DIVISION.

(Filed July 23, 1953.)

FREED, *J.*:

I have scrutinized the contentions raised by the motion for new trial.

They are addressed, in the main, to the claim that the verdict of the jury was against the overwhelming weight of the evidence. A court is warranted in setting aside the finding of a jury if it appears that it is manifestly and palpably in conflict with the evidence and that justice clearly demands it. *Aetna Casualty & Surety Co. v. Yeatts*, 122 F. 2d 350 (1941). The test is not whether the Court would have reached a different conclusion had the case been presented without the intervention of a jury. After careful deliberation, I am compelled to arrive at the decision that it would be a gross abuse of the Court's function and power to set aside a verdict reached by the twelve jurors in this case.

All the other assignments of error were argued at great length in the course of the trial and the record discloses the reasons for the ruling made in each instance. All the authorities were then carefully weighed and since then nothing has been presented to alter my view. No purpose would be served by an extended memorandum restating my opinion in respect of questions pertaining to evidence and the proper instruction to the jury.

The motion for new trial will be overruled.

OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT.

(Filed May 31, 1955.)

Before SIMONS, Chief Judge, McALLISTER and STEWART, Circuit Judges.

STEWART, Circuit Judge. This was an action for damages brought by appellant, hereinafter referred to as "Northwest," a commercial airline company, against appellee, hereinafter referred to as "Martin," a manufacturer of airplanes.[1] The action was based upon Martin's alleged negligence in the design and manufacture of five "Model 202" airplanes purchased by Northwest, resulting in the loss of one of the planes and the temporary loss of use of four others. No questions of warranty are involved, since the purchase agreement in effect limited Martin's liability to that imposed on it by law for its negligence.

The trial lasted approximately three months. The jury deliberated for ten days before returning general verdicts in favor of Martin.[2] The appendices on appeal number more than two thousand pages. We are told that the case is one of great importance not only because of its immediate impact upon the rights and liabilities of the parties, but perhaps even more so because of its supposed impact upon the airline and aircraft industries, and the relationships between them. Yet the case remains a negligence action, involving for the most part issues of fact, prolix

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[1] Certain insurance company subrogees were later joined as plaintiffs.

[2] The jury returned four separate verdicts, covering (a) the claim for damages due to the destruction of one plane; (b) the claim for reimbursement for Workmen's Compensation payments made by reason of the death of the members of the crew of that plane; (c) the claim for damages for loss of use of the other four airplanes prior to March 25, 1949; (d) the claim for damages for loss of use of those airplanes after April 14, 1949.

and technical though they be. From this thick overlay of factual controversy emerge familiar questions of ordinary care, proximate cause, contributory negligence and assumption of risk.

Martin is a Maryland corporation, with its plant and offices near Baltimore. It has been engaged in the design and manufacture of airplanes since 1909. Throughout World War II Martin devoted its efforts completely to the designing and building of military planes, as did the entire aircraft industry. It became apparent in the closing days of the war that the post-war period would provide a large potential market for modern, economical commercial transport planes. Martin decided to enter this market, and accordingly embarked upon the design of the "202," a fast, two-engine airplane which would incorporate many of the engineering and manufacturing advances made during the war period. Commencing early in 1945 the project moved ahead until by 1946 more than five hundred of Martin's designing engineers were working on the "202."

Some time in the summer of 1946, Northwest decided to purchase ten Martin 202's. The formal contract was not signed until February 24, 1947, but it was dated August 31, 1946, and the evidence shows that Northwest's decision to purchase the planes had been made in June of 1946. These ten airplanes were delivered to Northwest in 1947, and they proved so satisfactory that Northwest decided to buy three more 202's and signed the contract for their purchase on December 23, 1947. Northwest made subsequent purchases, so that it owned and was operating a fleet of twenty-five Martin 202's on August 29, 1948, the date on which occurred the dramatic events which provide the immediate background of this case.

At 3:50 p.m. on that day a Northwest 202 airplane, identified hereinafter as "No. 44," took off from Chicago

on a regularly scheduled non-stop flight for Minneapolis. It carried thirty-three passengers, a pilot, co-pilot and stewardess. No. 44 was one of the original ten 202's purchased from Martin, and, at the time of taking off, had flown a total of 1,321 hours, or about five per cent of its expected service life. So far as was then known, the airplane was in perfect condition.

During its flight the plane maintained routine operational radio contact with the ground, and at 4:55 p.m. it reported that it was over La Crosse, Wisconsin and estimated that it would arrive over the Hastings marker (near Minneapolis) at 5:21 p.m. The plane was authorized to commence its descent so as to pass over the Hastings marker at an altitude of 2,500 feet and was directed to report when it passed through the 7,000 foot level on its descending path. At 4:56 p.m. the pilot radioed that he was beginning his descent, and at 4:59 p.m. he advised that he was passing through the 7,000 foot level. No further messages were received from No. 44.

At about this time the plane was observed by witnesses on the ground proceeding into a violent thunder storm. A few minutes later, at approximately 5:05 p.m., the left wing tore off, and the airplane crashed near Fountain City, Wisconsin, a few miles to the northeast of Winona, Minnesota. All of the passengers and crew were killed. Subsequent investigation revealed that the immediate cause of the crash was the breaking of a front wing spar in the left wing at the point where the outer section of the wing was attached.

Later the same day, when all that was known of No. 44 was that it was overdue, another Northwest 202, hereinafter referred to as "No. 42," was flown on a regularly scheduled round-trip flight from Minneapolis to Duluth.

No. 42 was also one of the original ten 202's purchased from Martin by Northwest. It too had flown only a small fraction of its expected service life. The weather was fair, the air smooth, and the trip uneventful, except that the pilot noticed that in order to keep the plane in level flight, it required a somewhat unusual amount of extra "trim tab." After the pilot landed No. 42 in Minneapolis, he made a routine report, including a statement about the unusual trim conditions which he had encountered, and then got into his automobile to drive home. Fortunately, however, he changed his mind and returned to the ramp where No. 42 was parked. He located the head of the Northwest inspection crew, told him in detail what he had noticed on the trip to Duluth, and urged that the plane be carefully examined before being allowed to depart on its next trip. Accordingly, the inspectors did make a thorough examination and found that a joint in the right wing of No. 42 was completely broken, and that the wing was being held in place only by its "skin." It was the same side of the same step of the same joint that had broken in No. 44.

By this time Northwest had learned of the crash of No. 44, and its remaining twenty-three 202 airplanes were immediately grounded and thoroughly inspected. The inspection of these airplanes was made jointly by Northwest and Martin. The wings of the airplanes were all dissembled, and it was discovered that of the four remaining airplanes which had flown in excess of 1,200 hours, all had fatigue cracks in the wing joints, exactly where the wings of 44 and 42 had broken. Of the fifteen airplanes which had flown between 500 and 1,200 hours, seven were found to have fatigue cracks in the same wing joint. Of the four airplanes which had flown less

than 500 hours, no such fatigue cracks were found. It is conceded that the broken parts of the wing joints of Nos. 44 and 42 which caused the loss of the first plane and damage to the second were caused by failures which began and developed as fatigue cracks. It is further conceded that the expected safe service life of the 202 had been between twenty-five and thirty thousand hours. All of Northwest's 202's were subsequently rebuilt, in two successive phases, and the danger of premature fatigue failures in the wing joints was successfully eliminated.

Northwest then brought this action for damages resulting from the loss of No. 44 and for the loss of use of No. 42 and three other 202's during the time they were being repaired. It was Northwest's contention that the fatigue cracks were the direct result of Martin's negligence in a number of different respects in the design and manufacture of the 202 airplanes.

In order properly to understand this contention, it is necessary to review briefly the evidence as to the cause and nature of fatigue in metal. Fatigue is the phenomenon by virtue of which a metal part will eventually crack and break under repeated loads, each one of which is less than its tensile strength for one load. Three of the factors which affect fatigue life are, first, the kind of metal; second, the amount of repeated load as related to the strength of the metal for one load; and third, the configuration and surface condition of the metal.

It is known that a metal which is smooth and highly polished is less subject to fatigue than one with a rough finish or the surface of which is marred by a scratch or notch. A rough surface is called a "stress raiser." Abrupt changes of section in the metal are also "stress raisers," as are notches and bolt holes. It is stress concentration which is the fundamental cause of fatigue failure.

The fatigue life of some metals seems to be much more affected by stress raisers than does that of others. Those metals are said to be "notch sensitive." The Martin 202 was made from an aluminum alloy called 75ST, which was known to be much more notch sensitive than the alloy 24ST which had been used before 75ST was developed.

It was Northwest's contention that the wing joints which cracked and broke in Nos. 42 and 44, and which cracked in the other airplanes, had a number of unnecessary stress raisers which were the result of Martin's negligence in design and manufacture, and that it was these stress raisers which caused the premature fatigue failure at the bottom of the fourth step at the outer end of the front spar of the center wing. Northwest alleged that Martin was negligent in the basic design of the wing joint, in entrusting the design to an incompetent designer, in failing to provide proper fatigue testing of the wing joint, in using aluminum alloy 75ST where unusual stress raisers were present, in failing to make computations of the secondary or eccentric stresses in the wing joint, in failing to make strain-gauge tests of the wing joint, in violating certain Civil Aeronautics rules, and in making certain misrepresentations to the Civil Aeronautics Administration.

It was the position of Martin that it had used not only ordinary care, but very great care in the design and manufacture of the 202 airplanes. It contended alternatively that if there were a finding that it was negligent, Northwest had assumed the risk of danger or was guilty of contributory negligence.

Beyond what has been said, there seems little point in attempting to review in detail the evidence as to Martin's negligence. Evidence was adduced on its behalf

to show the great care with which the 202 was designed, manufactured, and tested. Evidence was adduced on behalf of Northwest to show that Martin should have known that the wing joint as designed and manufactured, and in view of the alloy from which it was made, was vulnerable to premature fatigue failure. Martin sought to meet Northwest's contentions by showing that the phenomenon of fatigue was an elusive and little understood one at the time these airplanes were designed and manufactured, and that in the light of the then state of the art every reasonable precaution was taken to guard against fatigue failure.

On this fundamental aspect of the case it is Northwest's position on this appeal that the district court should have found that Martin was guilty of negligence as a matter of law. We cannot accept this contention. The effect of the voluminous evidence was certainly to leave the question of Martin's lack of ordinary care in a state upon which reasonable minds could differ. Indeed the question appears to us to be an extraordinarily close one. That being so, the trial court was entirely correct in submitting that question to the jury.

Two further contentions of Northwest, however, raise considerably more serious questions. First, it is insisted that the trial court was in error in submitting to the jury the issue as to whether Northwest was barred from recovery because of its assumption of the risk of danger inherent in the defective wing joint in all five airplanes. Second, it is urged that the court was likewise in error in submitting to the jury the issue as to whether Northwest was guilty of contributory negligence with respect to all five airplanes. We shall discuss these contentions in the order presented.

Assumption of Risk.

It is Northwest's position that the evidence of record did not support a submission of the issue of assumption of risk to the jury at all. Northwest also claims that the issue was in any event not correctly stated in the instructions as given by the trial court. If Northwest is correct in its first contention, its second contention need not be considered.

The parties seem to be in agreement that in order to find that Northwest had assumed the risk of danger resulting from the defective wing joint, the jury would be required to find that Northwest had voluntarily, knowingly, and intelligently assumed the risk of that danger, or that the danger was so obvious that Northwest must be taken to have done so. *Morris v. Hockey Club*, 157 O. S. 225, 105 N. E. (2d) 419 (1952); *Masters v. N. Y. Central Rd. Co.*, 147 O. S. 293, 70 N. E. (2d) 898 (1947); *Knipfer v. Shaw*, 210 Wis. 617, 246 N. W. 328 (1933).

The evidence showed that during the period that the original ten 202's were being built for Northwest a Northwest resident engineer, two or three Northwest inspectors, and a group of Northwest pilots and various other personnel were stationed at the Martin plant. In addition to these Northwest employees who were in residence at the Martin plant as part of Northwest's so-called "Martin Procurement Project," a number of other Northwest employees, including officers and technical personnel, made frequent visits to the Martin plant. Their purpose in being there was at least two-fold, first, to familiarize themselves with the characteristics and specifications of the new airplanes, and secondly, to see to it that the airplanes as manufactured conformed not only to Martin's specifications, but also to Northwest's standards and operating needs,

not only in such major matters as safety, but in various minor respects, such as the design of the interior of the cabins and the location of washroom facilities. Northwest's agents therefore were in a position to observe and actually did observe the day-by-day manufacture of the airplanes. They were in a position to recommend and actually did recommend various changes in design and manufacture.

In the light of these circumstances the district court instructed the jury that it could consider whether or not Northwest had assumed the risk of danger resulting from (a) the basic design of the wing joints, (b) the material used (75ST) in the light of this design, (c) faulty workmanship or manufacture, and (d) the inadequacy of inspections and tests carried out by Martin. The jury was instructed that its finding that Northwest had assumed any of these risks would require a verdict for Martin.

As to Northwest's assumption of the risk inherent in the alleged faulty design, Martin insists that the Court was correct in submitting that question to the jury, particularly in view of the testimony of a witness called by Northwest who testified that the respects in which the design of the wing joint was dangerous and defective would, after a few minutes examination, be open and obvious to any competent engineer. This witness was a retired employee of the National Bureau of Standards. He was not and never had been an employee of Northwest. His testimony was at variance with the great weight of the evidence which showed that the problem of design from the point of view of fatigue danger was far from completely understood in 1947. However, even accepting this testimony at its face value, there is no evidence that any competent Northwest engineer ever gave the wing

joint any such examination. Those portions of the record to which counsel for Martin has directed this court's attention refer instead to the careful scrutiny that was given by both Martin and Northwest personnel to the design and installation of a wing *wedge* which was installed to give additional dihedral to the wings, after the initial test flights of the airplane in 1947 had shown it lacked stability. The wing *splice* was designed in December, 1945, long before Northwest had any connection with the Martin 202. Similarly, references to testimony by Northwest personnel of their knowledge that the metal "skin" of all airplanes might develop cracks lends no support to Martin's contention that Northwest knew of the dangerous design of the wing splice here involved.

As to Northwest's alleged assumption of the risk of possible danger in the use of the material 75ST, counsel for Martin calls our attention to evidence that a chemical engineer employed by Northwest had read and was familiar with certain scientific literature indicating that 75ST was an unusually notch sensitive material. There was no evidence that this witness was connected with the Martin Procurement Project or was familiar in any way with the design of the wing splice, and it was not Northwest's position that Martin was negligent in the use of 75ST per se, but rather in the use of that material in the wing splice as actually designed and manufactured.

As to Northwest's alleged assumption of the risk of danger resulting from poor workmanship and inadequate inspection, it is pointed out by Martin that the Northwest representatives present at the Martin plant had ample opportunity to observe and criticize the manufacturing and inspection procedures at all times. Martin emphasizes that, although the Northwest representatives did insist

upon changes in other details of the airplane during its manufacture, such as hinge bolts, they made no objection to the workmanship or manufacture of the faulty splice, nor did they request that additional inspection or testing of the wing joint be undertaken, although they had a right to do so. Indeed, the evidence shows that Northwest fully approved the tests as made.

This evidence not only falls short of providing a foundation for inferring assumption of risk, but on the contrary leads to the inference that Northwest did *not* know of or in any way appreciate a risk of danger in the alleged faulty manufacture and inadequate testing of the wing joint. The evidence that Northwest's representatives did insist upon changes whenever they saw any reason to be dissatisfied leads to the conclusion, at least by negative implication, that they saw no reason to criticize the wing joint. They had no reason whatever *not* to object to anything they might regard as hazardous, and, in fact, had been expressly instructed by Northwest to insist upon any changes they thought would increase the safety of the airplanes.

In short, we believe that there is a complete absence of any evidence that Northwest, at any time prior to August 29, 1948, had knowledge or appreciation of any risk of danger associated with the design, the material, the workmanship, or the tests of the faulty wing joints in the 202 airplanes. There is no evidence that the danger lurking in the wing joint was so obvious to those Northwest representatives who actually did observe it that they must be taken to have appreciated that danger. We conclude that it was error to submit to the jury the question of Northwest's assumption of risk in this case.

Contributory Negligence.

Northwest makes no objection to the form of the district court's charge on the question of contributory negligence. It is Northwest's position, however, that the trial court was in error in submitting the issue of contributory negligence to the jury at all, first, because that issue was not pleaded, and, secondly, because there was no evidence in the record to justify submission of that question to the jury. If Northwest is correct in its second contention, its first contention need not be considered.

Martin concedes that there was no evidence of any negligence on the part of Northwest with respect to the maintenance and handling of the airplanes after they were delivered to Northwest. Martin insists, however, that there was evidence sufficient to submit to the jury of Northwest's contributory negligence prior to the time the airplanes were completed and delivered.[3] The evidence to which our attention is directed is the same evidence upon which Martin bases its claim of Northwest's assumption of risk. Martin argues that the difference between assumption of risk and contributory negligence as delineated in the cases is merely one of degree—between risks so obvious they must be taken to have been known to the plaintiff and those slightly less obvious which the plaintiff might have discovered by the exercise of ordinary care. *Masters v. N. Y. Central Rd. Co., Morris v. Hockey Club, Knipfer v. Shaw,* all cited above.

Specifically, Martin again calls our attention to the fact that many representatives of Northwest were present throughout the period that the airplanes were manufac-

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[3] We are not here considering the question of Northwest's alleged contributory negligence with respect to the operation of No. 44, in flying it into a thunderstorm. Certain aspects of that issue are discussed later in this opinion.

tured and tested, and argues that in the exercise of ordinary care at least one of these representatives should have seen and appreciated the dangers and hazards in the wing splice.

It is conceded by Martin that "if Northwest had simply relied on Martin to produce a safe and sound airplane and had taken no further interest in the matter, there would be no issue here of contributory negligence." That in any event seems to be the law. One need not anticipate the negligence of another until he becomes aware of such negligence. *Baldridge v. Wright Gas Co., Inc.*, 154 O. S. 452, 96 N. E. (2d) 300 (1951) (Syl. 1).[4] It is not contributory negligence to fail to look out for danger when there is no reason to apprehend any. *Standard Oil Co. v. Burleson*, 117 F. (2d) 412, 414 (5 Cir., 1941); *Phillips Petroleum Co. v. Hooper*, 164 F. (2d) 743 (5 Cir., 1948); *S. S. Kresge v. Holland*, 158 F. (2d) 495, 498 (6 Cir., 1946). One to whom a duty is owed has a right to assume that it will be performed. He is not required to anticipate negligent acts or omissions on the part of others. *American Stores Co. v. Murray*, 87 F. (2d) 894 (3 Cir., 1937); *Powell Bros. Truck Lines, Inc. v. Piatt*, 92 F. (2d) 879, 880 (10 Cir., 1937); *Phillips Petroleum Co. v. Miller*, 84 F. (2d) 148, 153, 155 (8 Cir., 1936); *E. I. DuPont de Nemours & Co. v. Frechette*, 161 F. (2d) 318, 323 (8 Cir., 1947).

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[4] There is no discussion in the lengthy briefs of the possibility of a conflict of laws problem in this case, it apparently being agreed that the law of the forum (Ohio) applies, except with respect to No. 44, which crashed in Wisconsin. However, on the question of a duty to inspect, the law of the state where the airplanes were manufactured and delivered (Maryland) and of the state where the damage was discovered (Minnesota) seems in any event to be the same as that of Ohio. *Klein v. Dougherty*, 200 Md. 22, 26, 87 Atl. (2d) 821, 825 (1952); *Mahowald v. Beckrich*, 212 Minn. 78, 2 N. W. (2d) 569, 571 (1942).

While thus conceding that Northwest was under no duty to make a detailed inspection of the airplanes, Martin argues that since Northwest did in fact undertake an independent inspection, it was guilty of contributory negligence in accepting and putting the planes into use if dangers or defects existed in the wing splice which could have been discovered by the exercise of ordinary care. Martin refers us to no authority for this proposition.

In the light of the undisputed facts of this case, we are unable to accept Martin's contention. The evidence clearly showed that the damage was caused by fatigue cracks in the wing joints of the airplanes. There was no evidence whatever that any action of Northwest caused or contributed to cause those fatigue cracks. Northwest did not participate in any way in the design of the critical wing joint, nor in deciding upon its specifications. Northwest had no knowledge of any defect in the design. The evidence was clear that Northwest relied on the manufacturer for the elements of basic safety of the airplane, and there was no suggestion in the evidence that Northwest had any reason to doubt Martin's competence and skill as a designer and manufacturer of airplanes.

There was no evidence that Martin took any action or refrained from taking any action in the design, manufacture or testing of the critical wing splice *in reliance* upon Northwest's inspection. Where one undertakes an act which he has no duty to perform, and another reasonably relies upon that undertaking, the act must generally be performed with ordinary care. See *Conowingo Power Co. v. State of Maryland*, 120 F. (2d) 870, 874 (4 Cir., 1941). Cf. *Restatement of Law of Torts*, § 325. That, however, is not this case. There was no evidence that Martin relied in any way upon the inspections made by Northwest, with respect to the airplanes generally or the wing joint in

particular. That being so, we fail to see how the inspections which were made by Northwest contributed in any way to the damages it sustained.

A negligent defendant is exculpated from liability to a plaintiff who has increased the risk of harm to himself over what the risk would have been had he exercised ordinary care. Here it is conceded that in the exercise of ordinary care Northwest need not have made any inspection of the airplanes at all. If Northwest had made no inspections, it is obvious that the risk of danger in the wing joints would have been no greater and no less than it actually turned out to be. The fact that inspections were made in no way increased the risk of harm. Northwest must not be penalized for attempting in its own interest to conform to a higher standard of care than that imposed upon it by the law.

The realities of the situation support the conclusion we have reached. The evidence showed that the Martin 202 was an assembly of approximately 75,000 separate parts. Some 17,000 separate drawings were made in connection with its design and manufacture. More than five hundred Martin designing engineers were engaged on the 202 project in 1946, approximately a hundred of them on the wing alone. Over 2,000,000 man hours were expended on the design of the 202. By contrast, Northwest had never more than three and for most of the time only two inspectors present at the Martin plant. None of them was an aeronautical engineer. In addition, one engineer from Northwest was stationed at Martin's plant. The evidence is clear that the primary concern of these Northwest representatives was with those obvious aspects of the design and manufacture of the airplane affecting Northwest's operational and maintenance procedures. With respect to elements of primary structure and basic safety

Northwest relied in full upon Martin, as in the exercise of ordinary care it was entitled to do. In view of the complexity and magnitude of the project, Northwest was obviously quite helpless to do anything else.

As we have said, the evidence of Martin's negligence in the design, manufacture and testing of the 202 presented an extraordinarily close question. The question of whether or not it departed from a standard of ordinary care had, of course, to be resolved by measuring its conduct against the standard of what an ordinarily prudent designer and manufacturer of airplanes would have done. Northwest, on the other hand, was the operator of an airline. The record contains no evidence that it was guilty of any departure from the standard of care of an ordinarily prudent airline operator. See *Restatement of Law of Torts*, § 289. We conclude that the district court was in error in submitting to the jury the issue of Northwest's contributory negligence based upon its inspection of the five airplanes.

Contributory Negligence with Respect to No. 44—Radar.

With respect to No. 44, the airplane lost in flight, Martin's answer averred that Northwest had been guilty of contributory negligence in causing the plane to be flown into a storm, in failing to promulgate and follow proper flying practices, in failing to reduce the speed of the plane while in the storm, and in failing to give the pilot proper weather information. Evidence was adduced in support of these allegations, creating a jury question as to whether or not Northwest had been guilty of contributory negligence in the respects charged, and whether or not such contributory negligence had been a cause of the plane's loss. The trial court submitted this issue to the jury with clarity and completeness, correctly instructing them as to

the applicable Wisconsin law of comparative negligence (see § 331.045, Wisconsin Statutes 1951).

Martin's answer also alleged that Northwest had been guilty of contributory negligence in failing to equip No. 44 with proper and adequate radar equipment "so as to enable it to be navigated around and avoid the violent storm area." Over Northwest's objection the trial court submitted to the jury the question of whether the failure to install airborne radar constituted negligence contributing to cause the loss of No. 44. Northwest assigns as error the submission of the radar issue to the jury, insisting that there was no evidence to support it.

The evidence showed that neither Northwest nor any other American airline had airborne radar in operational use in August, 1948, when No. 44 was lost. Early in 1948 Northwest had conducted a study lasting several months as to the feasibility of using airborne radar on its commercial flights. The purpose of the study had been to determine the advantage and utility of airborne radar in (1) terrain collision avoidance; (2) avoidance of interflight collision with other aircraft; (3) avoidance of high turbulence or high precipitation areas. As a result of the study, Northwest had concluded that the radar then commercially available was not feasible in performing these functions for the reasons that (1) while trustworthy in about 95% of the cases, it was likely to be dangerously misleading in the remaining 5%; (2) the screen illumination was so low as to make the equipment useless in daytime; (3) complete "historical attention" on the part of the viewer was required, that is, the radar echo at any one moment would be unintelligible to one who had not given the screen complete attention for at least the preceding five minutes.

On the other hand, there was evidence that, prior to the time of No. 44's loss, airborne radar had been used successfully in military planes. There was also evidence that airborne radar had been used in a United States Government experimental project, known as "The Thunderstorm Project," carried out in 1946 and 1947 by the Air Force, Navy, National Advisory Committee for Aeronautics, and the Weather Bureau, for the purpose of obtaining information concerning the internal structure and behavior of thunderstorms in the interest of safety in flying.

The report of this project, published under the title, "The Thunderstorm," was admitted in evidence. That document contained the following two statements, among others: "With a radar equipped aircraft an appreciable reduction in gust experience can be achieved by circumnavigation of radar echos caused by thunderstorms. * * * If his plane is equipped with a radar set having reasonably long range and plan-position indicators, the pilot may observe the structure of the squall line while still many miles away and take action to plan his penetration or circumnavigation with a minimum loss of time."

We are in complete agreement with Martin's statement that "whether the governing law be that of Wisconsin, Ohio, or the Federal Courts," the fact that Northwest conformed to the practice of other airlines in failing to equip No. 44 with radar did not establish its exercise of ordinary care as a matter of law. Customary practice is not ordinary care; it is but evidence of ordinary care. *E. L. Chester Co. v. Wisconsin Power & Light Co.*, 211 Wis. 158, 247 N. W. 861 (1933); *Sprecher v. Roberts*, 212 Wis. 69, 248 N. W. 795 (1933); *Ault v. Hall*, 119 O. S. 422, 164 N. E. 518 (1928); *Texas & Pacific Ry. Co. v. Behymer*, 189 U. S. 468 (1903).

The difficulty we encounter, however, is occasioned by our failure to find in the record any evidence that satisfactory airborne radar equipment was commercially available in August, 1948. Three expert witnesses testified on the question of airborne radar, two on behalf of Northwest and one on behalf of Martin. Their uncontradicted testimony was that the airborne radar commercially available in August, 1948, was unreliable and unsatisfactory. Martin's witness testified that "There were no satisfactory radars available for commercial use" in the summer of 1948.

While the two above-quoted excerpts from "The Thunderstorm" might at first blush seem to imply otherwise, we have found nothing in that publication to indicate that satisfactory airborne radar was then commercially available. Indeed the document contains statements indicating such radar was not then available. For example: "At the present time a practical way is not available for a pilot approaching a thunderstorm to determine, or be informed of, the number and location of the cells in it and their varying stages of development. * * * Thus there is reason to believe that *further development of radar equipment* will enable the pilot to make use of it for selecting a flight path through the cloudy air between the cells of a storm, where hazardous conditions will be at a minimum."

This issue of airborne radar involved only one of many aspects of Northwest's alleged contributory negligence with respect to the loss of No. 44. It played a prominent part, however, in argument to the jury, and its discussion occupies a substantial portion of the briefs on appeal. We need not seek the reason. The very word "radar" is enough to capture the imagination with its much-publicized marvels. Yet in August, 1948, there was

no evidence that feasible airborne radar was commercially available to operators of airlines.

On the basis of the evidence of record, we conclude that there was prejudicial error in submitting this question to the jury.

The District Court's Rulings on Admissibility of Evidence.

Northwest complains of the district court's limitation and rejection of certain evidence offered by it and of the court's admission of certain evidence offered by Martin.

Purportedly to show the state of the art prior to the manufacture of the 202's, Martin was permitted to offer in evidence a number of Civil Aeronautics Administration directives dealing with various and sundry defects which experience had disclosed in different types of airplanes. While we agree with Northwest that the directives had little relevance, we think there was no abuse of discretion in admitting them.

We believe too that the district court was correct in refusing to permit Northwest to use the evidence of the modifications in the wing joint, made by Martin after the damage was discovered, to show what Martin should have done in the first place. Northwest argues that its purpose was simply to show what Martin could have done in the original design and manufacture of the wing joint, but the result would have been to provide a basis for inferring what should have been done. This kind of hindsight evidence is not properly admissible upon the issue of ordinary care. *Columbia Railroad Co. v. Hawthorne*, 144 U. S. 202 (1892). Similarly, the court was correct in excluding a report of certain experiments conducted by The Aluminum Company of America Research Laboratory,

after the faulty wing joint was discovered. Northwest contends that this report should have been admitted in rebuttal to show the relative merits of various types of wing splice design. In view, however, of the voluminous evidence of record showing the complicated interplay of stresses in a wing structure, the Aluminum Company experiments with isolated joints were of doubtful probative value. The report of the experiments was involved, and the trial court did not abuse its discretion in ruling that the danger of the report's confusing the jury outweighed its materiality and relevance. See 2 Wigmore, *Evidence* [3rd Ed., 1940], Section 444.

During the trial the district judge was faced with the decision of many complicated evidentiary questions. His rulings were conscientious and consistently fair. Indeed, in his entire conduct of this case during the many tedious weeks of trial, he manifested professional competence of an extremely high order. It is accordingly with great regret that we have reached the conclusions indicated in this opinion with respect to fundamental aspects of the court's instructions to the jury.

For the reasons pointed out in this opinion, the judgment is reversed and the case remanded to the district court for a new trial.

McALLISTER, Circuit Judge, *dissenting*. In the prevailing opinion, Judge Stewart has most carefully and comprehensively analyzed the several thousand pages of the record in this complicated case, and the extensive briefs, with the result that the vast body of the evidence, including the technical testimony of engineering experts, has been simplified, and the issues clearly presented. I differ only in the conclusion as to the questions of assump-

tion of risk and contributory negligence which I feel were properly submitted to the jury. It was appellants' witness who testified that the wing splice design was not a safe and suitable design; that it was dangerous and defective; and that the dangers were not such as to require great and discriminating knowledge to understand, but were so open and obvious to any competent engineer that they might be perceived at first blush. While this was the only evidence to such effect, it would seem that appellee Martin Company was entitled to protect itself against the contingency that the jury might believe it by asking the court to charge on assumption of risk; and that the district court properly submitted the question to the jury. As to the issue of contributory negligence, while the evidence was not extensive or convincing, there was, in my opinion, some evidence that radar equipment was available; that appellant Northwest Airlines had experimented with it in its planes, in studies to determine the advantage of using it to avoid high turbulence areas; and that it would have been of assistance in circumnavigating a thunderstorm area. There was also evidence that while radar would have given an accurate picture of the turbulence 95% of the time, it would have been inaccurate and dangerous 5% of the time; that the screen illumination was so low as to make the equipment useless in the daytime; and that continuous attention by the viewer of the radar was necessary. In the light of all of the evidence—much of it, confessedly, lacking the certain and specific quality that would remove doubts as to whether the question of contributory negligence was in the case—it yet seems to me that the district court properly submitted to the jury the question whether in the exercise of due care, Northwest Airlines should have installed radar as an aid to thunderstorm flying. I would, therefore, affirm the judgment of the district court.

JUDGMENT OF THE UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT.

(Filed May 31, 1955.)

Appeal from the District Court of the United States for the Northern District of Ohio.

This cause came on to be heard on the transcript of the record from the District Court of the United States for the Northern District of Ohio, and was argued by counsel.

On consideration whereof, it is now here ordered and adjudged by this Court that the judgment of the said District Court in this cause be and the same is hereby reversed and the case remanded to the district court for a new trial.

ORDER OF THE COURT OF APPEALS DENYING REHEARING.

(Filed August 29, 1955.)

The petition for rehearing is denied. Judge McAllister is of the opinion that the petition for rehearing should be granted.

ORDER OF THE COURT OF APPEALS DENYING MOTION TO VACATE.

(Filed October 3, 1955.)

Upon consideration of the motion of Glenn L. Martin Company for an order (a) vacating and setting aside the order of this court dated August 29, 1955, denying appellee's petition for rehearing, and (b) reinstating said petition for rehearing for reconsideration by the court *en banc;*

IT IS ORDERED that the said motion be and it hereby is denied.

In the order of this court of August 12, 1955, denying a motion to reconsider in *National Labor Relations Board v. Cambria Clay Products Company,* No. 12072, it was stated: "And the court being of the opinion that the uniform procedure heretofore followed by the court should not be departed from, namely, that in cases where the appeal was heard, and the judgment or order complained of was decided, by a regular Court consisting of three judges only, a petition to rehear or to reconsider should not be considered by the Court en banc." The uniform procedure there made public was established after full consideration by a majority of the Circuit Judges of this Circuit in active service.